



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1176025
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1176025

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Langston, D. S.
Well Name	Reif 31-2
Doc ID	1176025

All Electric Logs Run

Gamma Ray
Borehole Compensated Neutron
Photoelectric Lithology Density
Phased Induction Tool
Micro Log
Comp. Sonic
X-Y Caliper Combined
Sample Log

Form	ACO1 - Well Completion
Operator	Langston, D. S.
Well Name	Reif 31-2
Doc ID	1176025

Tops

Name	Top	Datum
PLATTMOUTH	2778	-1017
HEEBNER	2837	-1076
TORONTO	2854	-1097
DOUGLAS	2867	-1106
BROWN LIME	2954	-1193
LANSING	2972	-1211
STARK SHALE	3170	-1409
HUSHPUCKNEY	3209	-1448
BASE KANSAS CITY	3230	-1469
ARBUCKLE	3272	-1511

Invoice

POST OFFICE BOX 438
 HAYSVILLE, KS 67060
 (316) 524-1225
 (316) 524-1027 FAX

GREAT BEND, KS
 (620) 793-3366
 FAX (620) 793-3536

INVOICE NUMBER:
C41911-IN

BILL TO:

LEASE: REIF 31-2

D.S. LANGSTON
 310 W. CENTRAL, STE. 202
 WICHITA, KS 67202-1004

DATE	ORDER	SALESMAN	ORDER DATE	PURCHASE ORDER	SPECIAL INSTRUCTIONS	
10/28/2013	C41911		10/22/2013		NET 30	
QUANTITY	U/M	ITEM NO./DESCRIPTION		D/C	PRICE	EXTENSION
20.00	MI	CEMENT MILEAGE PUMP TRUCK		0.00	4.00	80.00
20.00	MI	CEMENT MILEAGE PU TRUCK		0.00	2.00	40.00
1.00	EA	CEMENT PUMP CHARGE		0.00	1,600.00	1,600.00
230.00	SAX	60-40 POZ MIX 2% GEL		0.00	9.25	2,127.50
1,700.00	LB	SALT		0.00	0.25	425.00
150.00	LB	FRICTION REDUCER C-37		0.00	3.75	562.50
150.00	LB	C-41P		0.00	3.75	562.50
1,000.00	LB	GILSONITE		0.00	0.75	750.00
2.00	EA	BASKETS		0.00	155.00	310.00
6.00	EA	CENTRILZERS		0.00	65.00	390.00
1.00	EA	PACKER SHOE		0.00	2,500.00	2,500.00
1.00	EA	LATCH DOWN PLUG & BAFFLE		0.00	175.00	175.00
600.00	GAL	MUD FLUSH		0.00	0.75	450.00
290.00	EA	BULK CHARGE		0.00	1.25	362.50

Continued

*paid 10/29
 check #8252*

District _____ F.O. No. 41911
 COUNTY RICE State KS
 Casing: Size 5 1/2 Type & Wt. 14# Set at 3338 ft.
 Perforated from _____ ft. to _____ ft.
 Cemented: _____ Perforated from _____ ft. to _____ ft.
 Tubing: Size & Wt. _____ Swung at _____ ft.
 Perforated from _____ ft. to _____ ft.
 Open Hole Size _____ T.D. _____ ft. P.B. to _____ ft.

Type Treatment: Amt. _____
 Bkdown _____ Bbl./Gal. _____
 _____ Bbl./Gal. _____
 _____ Bbl./Gal. _____
 _____ Bbl./Gal. _____
 _____ Bbl./Gal. _____
 Flush _____
 Treated from _____ ft. to _____ ft. No. ft. 0
 from _____ ft. to _____ ft. No. ft. 0
 from _____ ft. to _____ ft. No. ft. 0
 Actual Volume of Oil / Water to Load Hole: _____ Bbl./Gal.

Pump Trucks. No. Used: Std. 318 Sp. _____ Twin _____
 Auxiliary Equipment 360-310
 Personnel BRANDON JOE GREG AND JORDAN
 Auxiliary Tools _____
 Plugging or Sealing Materials: Type _____ Gals. _____ lb.

Company Representative DAVE Treater BRANDON

TIME a.m./p.m.	PRESSURES		Total Fluid Pumped	REMARKS
	Tubing	Casing		
4:30				ON LOCATION
				TD-3380'
				PACKER SHOE-3338'
				BASKET-3328'-3246'
				CENT-3288'-3206'-3122'-3037'-2953'-2871'
				DISPLACEMENT-81.2
				BREAK CIRCULATION WITH MUD PUMP AND CIRCULATE FOR 30 MIN
				PUMP 600 GAL MUD FLUSH AND SET PACKER AT 400#
				PLUG RAT HOLE WITH 30 SKS 60/40 2% GEL
				MIX 200 SKS 60/40 2% GEL 18% SALT 3/4 % CFR 2 AND 3/4 % 41P
				5# PER SK GILSONITE
				DISPLACE PLUG 5 BPM 800# . PLUG LANDED AT 1000#
4:30				RELEASE PRESSURE AND PLUG STAYED
				THANKS
				BRANDON

Invoice

POST OFFICE BOX 438
 HAYSVILLE, KS 67060
 (316) 524-1225
 (316) 524-1027 FAX

INVOICE NUMBER:
 C41907-IN

BILL TO:
 D.S. LANGSTON
 310 W. CENTRAL, STE. 202
 WICHITA, KS 67202-1004

LEASE: REIF 31-2

DATE	ORDER	SALESMAN	ORDER DATE	PURCHASE ORDER	SPECIAL INSTRUCTIONS	
10/22/2013	C41907		10/17/2013		NET 30	
QUANTITY	U/M	ITEM NO./DESCRIPTION		D/C	PRICE	EXTENSION
20.00	MI	CEMENT MILEAGE PUMP TRUCK		0.00	4.00	80.00
20.00	MI	CEMENT MILEAGE PU TRUCK		0.00	2.00	40.00
1.00	EA	CEMENT PUMP CHARGE		0.00	1,100.00	1,100.00
225.00	SAX	65-35 POZ MIX 2% GEL		0.00	9.25	2,081.25
100.00	SAX	60-40 POZ MIX 2% GEL		0.00	9.25	925.00
8.00	SAX	2% ADDITIONAL GEL		0.00	22.00	176.00
9.00	SAX	CALCIUM CHLORIDE - SAX		0.00	40.00	360.00
342.00	EA	BULK CHARGE		0.00	1.25	427.50
300.96	MI	BULK TRUCK - TON MILES		0.00	1.10	331.06
<p><i>paid 10/29 check #8247</i></p>						
REMIT TO:		COP		Net Invoice:		5,520.00
P.O. BOX 438 HAYSVILLE, KS 67060		FUEL SURCHARGE IS NOT TAXABLE AND IS ADDED TO MILEAGE, PUMP AND OR DELIVERY CHARGES ONLY.		RICCO Sales Tax:		78.00
RECEIVED BY _____		NET 30 DAYS		Invoice Total:		5,599.00

There will be a charge of 1.5% "per month" (18% annual rate) on all accounts over 30 days past due.

Copeland Acid & Cement is a subsidiary of Gressel Oil Field Service
 Gressel Oil Field Service reserves a security interest in the goods sold until the same are paid for in full and reserve all the rights of a secured party under the Uniform Commercial Code



**Scale 1:240 (5"=100') Imperial
Measured Depth Log**

Well Name: REIF # 31-2
Location: AP-SE-SW-NE-SW 1/4 of Sec. 31 - Tsp. 18 S. Rge. 10 W.
License Number: A.P.I. # 15-159-22745-00-00
Spud Date: 10/16/2013
Surface Coordinates: 1375' FSL & 1750' FWL
Region: RICE CO., KS.
Drilling Completed: 10/23/2013

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 1753' **K.B. Elevation (ft):** 1761'
Logged Interval (ft): 477' **To:** 3380' **Total Depth (ft):** 3380'
Formation: ARBUCKLE
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: D. S. LANGSTON KCC LIC. # 30525
Address: 310 W. CENTRAL, STE. # 202
WICHITA, KANSAS 67202-1004

GEOLOGIST

Name: DAVID P. WILLIAMS, P.G.
Company: DW ENERGY, LLC.
Address: 312 NORTH BROADVIEW STREET
WICHITA, KANSAS 67208

CASING & DEVIATION

Surface Casing: Ran 11 joints of new 23#, 8 5/8" casing, Tally @ 467', Set @ 477', used 325 sacks of 65/35 6% gel, 3% cc, 60/40 2% gel, 3% cc, cement circulated, by Copeland Cementing Company, plug down @ 7:00 A.M. on 10/17/13.,

5 1/2" Production Casing: Ran 80 joints of new 15.5#, 5 1/2" casing, Tally @ 3330', Set @ 3338', used 230 sacks total, 200 sacks of 60/40, 2% gel, 18% salt, 3/4% CFR, 2 3/4% IP / 30 sacks of 60/40, 2% gel for Rat hole, cemented, by Copeland Cementing Company (Ticket #41911), job complete @ 4:15 A.M. on 10/23/13.

DEVIATION SURVEYS TAKEN: @ 477' = 1 degree; @ 3220' = 1 degree; @ 3380' = 2 degrees.

DSTs

~~DST # 1 3174'-3220' Times: 30"-30"-30"- 30".

IF = Weak Surface Blow & Died/2": FF= No BLow. Flushed Tool (Slight Blowback & No Help).

Recovery: 20 Mud w/Oil Spots (100% M).

Pressures: IH =1537#; FH =1511#; IF=29-34#; FF =35-39#; ISIP = 484#; FSIP = 512#. Temp.= 111 degrees F..

~~ DST # 2 3258'-3295'. Times: 30"-30"-30"-30";

Blow: IF=Strong/ BOB/3". No Blow Back.; FF= Strong Blow BOB/ 2.5". FSIP= No Blow Back.

Recovery: 1827' TF: 120' GIP; 1575' Oil (100% O) & 252' GOCM (25% Gas; 10% Oil; 65% Mud). API Grv. = 37.8 @ 118 degrees F..

Pressures: IH=1657#; FH=1667#; IF=55-402#; FF =407- 642#; ISIP=1078#; FSIP=1032#.


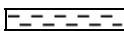

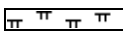
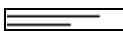





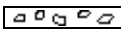







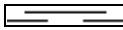

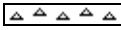


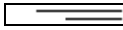
Comments

After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests taken and analysis from the electric logs run, it was determined by all parties that production casing be run in order to further evaluate this well.










































































Respectfully submitted,

David P. Williams, P.G

ROCK TYPES

 Anhy	 Clyst	 Gry sh	 Mrlst	 Shgy
 Bent	 Coal	 Gyp	 Red shale	 Sltst
 Brec	 Congl	 Igne	 Salt	 Ss
 Carb sh	 Dol	 Lmst	 Shale	 Till
 Cht	 Grn sh	 Meta	 Shcol	

ACCESSORIES

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp	 Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff FOSSIL  Algae  Amph	 Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Fuss  Gastro  Oolite  Oomold  Ostra  Pelec	 Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg  Ssstrg	TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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OTHER SYMBOLS

- POROSITY**
 [E] Earthy
 [F] Fenest
 [X] Fracture
 [I] Inter
 [M] Moldic
 [O] Organic
 [P] Pinpoint

- [V] Vuggy
SORTING
 [W] Well
 [M] Moderate
 [P] Poor

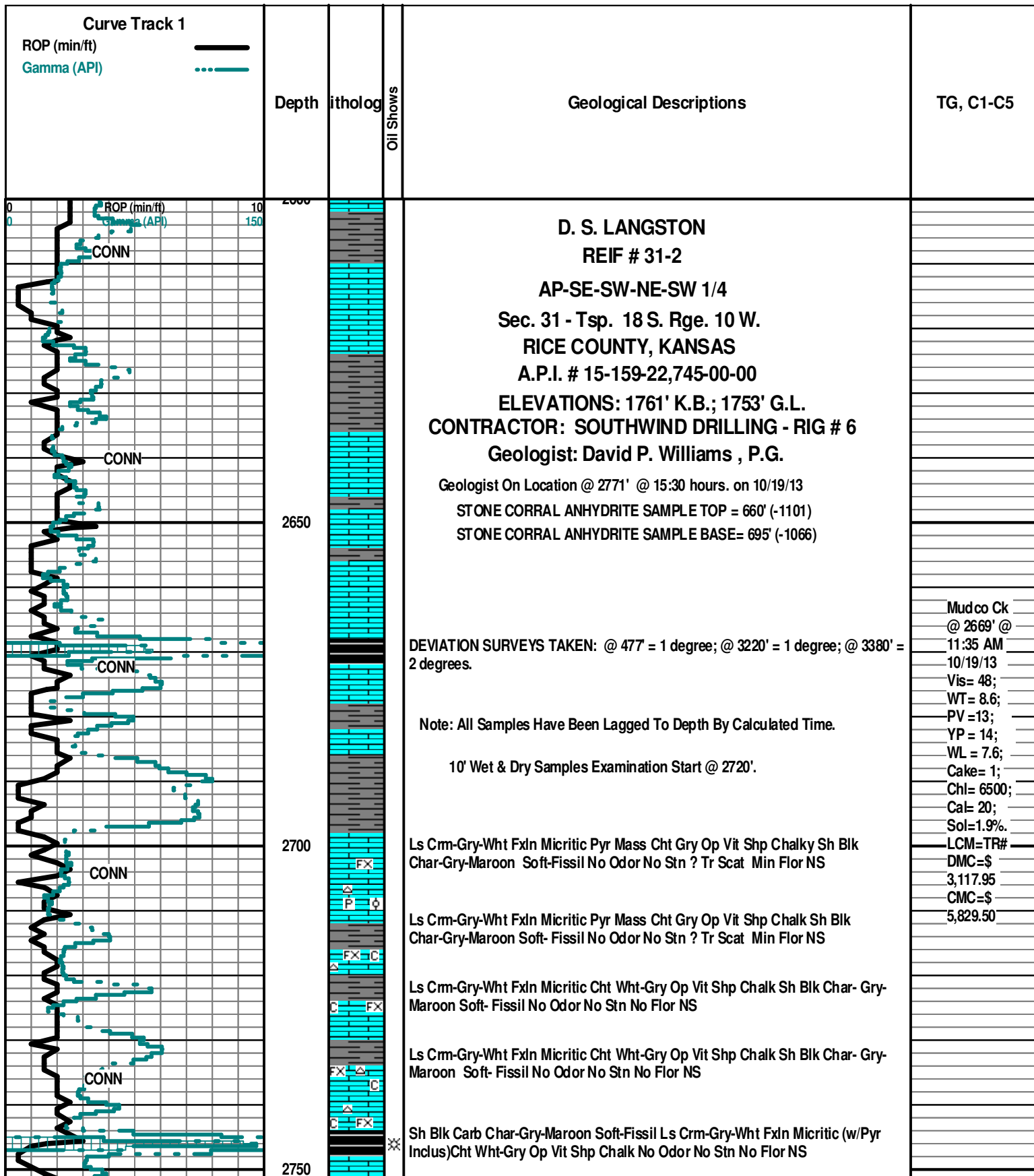
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

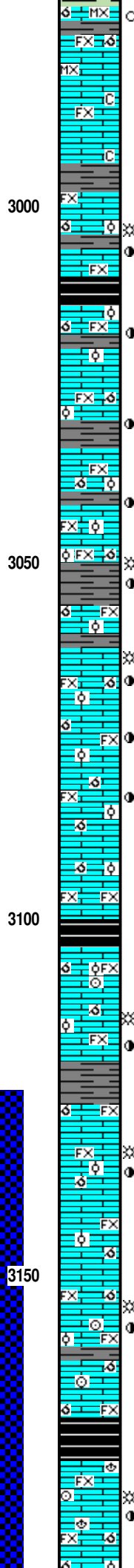
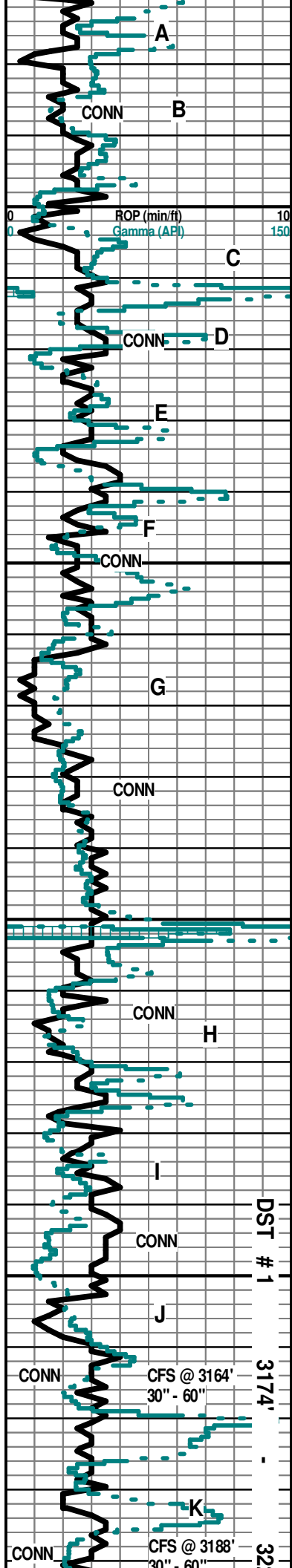
- [●] Even
 [○] Spotted
 [○] Ques
 [□] Dead

- EVENT**
 [▽] Rft
 [▶] Sidewall

- OIL SHOW**
 [X] Gas show

- INTERVAL**
 [■] Dst
 [■] Dst_alt





Ls Wht-Crm MicroIn-FxIn Mostly Micrite Grad Poor OOM Por (w/OOL in PI) w/Poor-Fair InterOOL/OOM Por w/? Poor-Fair SG/SO (Few Pcs) Sh Char-Gry Soft-Fissil (w/ Carb & Micaceous Includ) Abd No Odor ? Lt Brn Stn No Flor ? SG/SO
 Ls Crm-Wht-Tan FxIn Micrite Poor IxIn Por Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS
 Ls Crm-Wht-Tan FxIn Micrite Poor IxIn Por Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS
 Ls Wht-Crm-Tan FxIn Dns Micrite Grad Fair-Med OOM Por (w/OOL in pl) Good Pin-Pt -Med IxIn Vug Leaching Fair-Med Dissolu (? Poor InterOOM Por) Med SG/SO Med Sat Stn (few Pcs (5% in tray) Med Odor Good (Clear-Lt Grn) Sat Flor SG/SO
 Ls Wht-Crm FxIn Dns Micrite Grad Fair-Med OOM Por (w/OOL in pl) Good Pin-Pt -Med IxIn Vug Leaching Fair-Med Dissolu Med SG/SO Med Good Sat Stn (10% in tray) Med-Good Odor Good (Clear-Lt Grn) Sat Flor SG/SO
 Ls Wht-Crm FxIn Dns Micrite Grad Fair-Med OOM Por (w/OOL in pl) Good Pin-Pt -Med IxIn Vug Leaching Fair-Med Dissolu Med-Good SG/SO Med Good Sat Stn Med-Good Odor Good (Clear-Lt Grn) Sat Flor SG/SO
 Ls Wht-Crm FxIn Dns Micrite Grad Fair-Med OOM Por (w/OOL in pl) Good Pin-Pt -Med IxIn Vug Leaching Fair-Med Dissolu Med-Good SG/SO Med Good Sat Stn Med-Good Odor Good (Clear-Lt Grn) Sat Flor SG/SO
 Ls Wht-Crm FxIn Good OOM Por w/ OOL in pl Good Vug Leaching Good Dissolu Med-Good SG/SO Med Good Sat Stn Med-Good Odor Good (Clear-Lt Grn) Sat Flor Good SG/SO
 Ls Wht-Crm FxIn Good OOM Por w/ OOL in pl Good Vug Leaching Good Dissolu Med-Good SG/SO Med Good Sat Stn Med-Good Odor Good (Clear-Lt Grn) Sat Flor Good Fos (Crin) SG/SO
 Ls Wht-Crm FxIn Good OOM Por w/ OOL in pl Good Vug Leaching Good Dissolu Med-Good SG/SO Med Good Sat Stn Fair-Med Odor Good (Clear-Lt Grn) Sat Flor Med SG/SO
 Ls Wht-Crm FxIn Fair-Med OOM Por (w/ OOL in pl) Med Vug Leaching Med Dissolu Med ? SG/SO Med Odor Good ? (Lt Grn) Scat Sat Flor SG/SO (5% of tray) ? SG/SO.
 Ls Wht-Crm FxIn Fair OOM Por (w/ OOL in p) Fair Vug Leaching (Few Pcs) Fair Dissolu ? SG/SO Fos (Crin) Sh Char-Gry-Grn-Red Tr Blk-Carb Fissil ? Sat Stn Fair-Med Odor Fair (Lt Grn) Scat Sat Flor ? SG/SO (5% of tray)
 Ls Wht-Crm FxIn Fair-Med OOM Por (w/ OOL in p) Fair-Med Vug Leaching Fair-Med Dissolu MSG/MSO Sh Char-Gry-Grn- Tr Blk-Carb Fissil Lt Brn Sat Stn Fair-Med Odor Fair-Med (Lt Grn) Scat Sat Flor MSG/MSO (15% of tray)
 Ls Wht-Crm FxIn Dns Micrite Grad Fair OOM Por (w/ OOL in p) Fair Vug Leaching Fair Dissolu SG/SO Sh Char-Gry-Grn- Tr Blk-Carb Fissil Lt Brn Sat Stn Fair Odor Fair (Lt Grn) Scat Sat Flor SG/SO (5% of tray)
 Ls Wht-Crm FxIn Dns Micrite Grad Fair OOM Por (w/ OOL in p) Fair Vug Leaching Fair Dissolu SG/SO Sh Char-Gry-Grn- Tr Blk-Carb Fissil Lt Brn Sat Stn Fair Odor Fair (Lt Grn) Scat Sat Flor SG/SO (5% of tray)
 20" CFS @ 3164' Ls Wht-Crm FxIn Good OOM Por (w/ OOL in pl) Med- Good Vug Leaching Med-Good Dissolu Med-Good SG/SO Med-Good Sat Stn Med-Good Odor Good (Lt Grn) Scat Sat Flor (15% of tray) Sh Char-Gry-Grn Fissil MSG & MSO
 40" CFS @ 3164' Ls Wht-Crm FxIn Good OOM Por (w/ OOL in pl) Med- Good Vug Leaching Med-Good Dissolu Med-Good SG/SO Med-Good Sat Stn Med-Good Odor Good (Lt Grn) Scat Sat Flor (15% of tray) Sh Char-Gry-Grn Fissil MSG & MSO
 60" CFS @ 3164' Ls Wht-Crm-Tan FxIn Med-Good OOM Por (w/ OOL in pl) Med- Good Vug Leaching Med-Good Dissolu Med-Good SG (& SFO in Wtr Under Heat) Med-Good Sat Stn Med-Good Odor Good (Lt Grn) Scat Sat Flor (15% of tray) Fos (Crin) Sh Char-Gry-Grn Fissil MSG & MSO

Mudco Ck
 @ 3170' @
 8:25 AM
 10/20/13
 Vis= 45;
 WT= 10.5#;
 PV = 11;
 YP = 15;
 WL = 7.6;
 Cake = 1;
 Chl= 9200;
 Ca= 20;
 Sol=5.2%.
 LCM= 0#
 DMC=
 \$ 630.20
 CMC=
 \$6,459.70

~ DST # 1 ~
 3174'-3220'
 Times:
 30"-30"-30"- 30"
 IF Blow = Weak
 Surface Blow
 Build Died/2":
 FF= No Blow.
 -Flushed Tool
 (Slight Blowback
 & No Help).

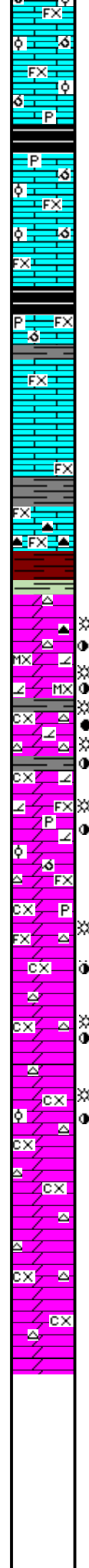
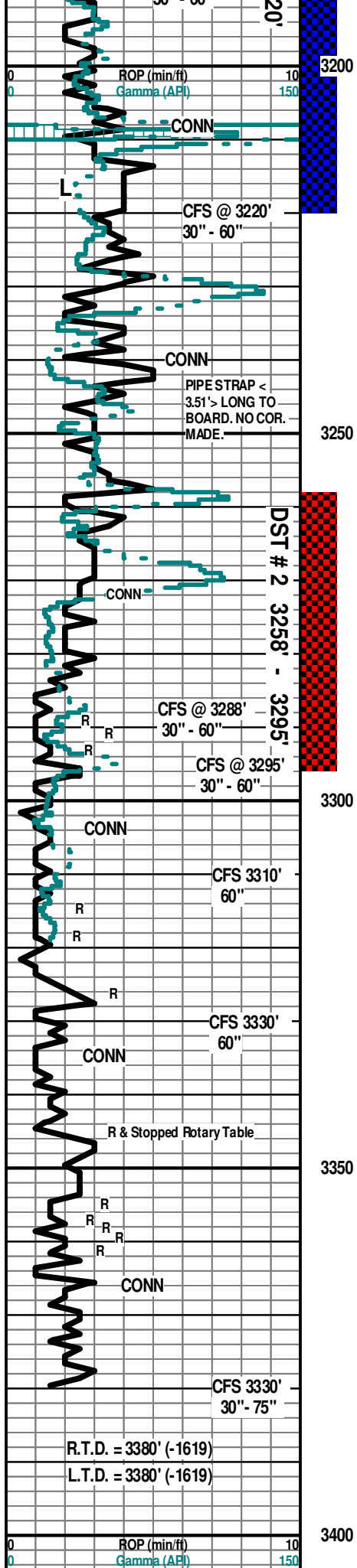
Recovery: 20'
 Mud (w/Oil Spots
 (100% M).

Pressures:
 IH = 1537#;
 FH = 1511#;
 IF = 29-34#;
 FF = 35-39#; ISIP
 = 484#; FSIP =
 512#. Temp. =
 111 degrees F..

STARK SHALE 3170' (-1409)

30" CFS @ 3188' Sh Blk Carb-Char-Aqua Fissil Ls Wht-Crm-Tan FxIn Med OOM Por (w/ OOL in pl) Med Vug Leaching Med Dissolu Med (w/SSG (& SSO in Wtr Under Heat) Med Sat Stn Med Dec Odor Fair (Lt Grn) Scat Sat Flor (5% of tray) Fos (Brach) Sh Char-Gry-Grn Fissil MSG & MSO

Mudco Ck
 @ 3272' @
 9:00 AM
 10/21/13
 Vis= 50;
 WT= 7.8;
 PV =14;
 YP = 16;



Fair-Med Sat Stn Fair-Med Dec Odor Fair (Lt Grn) Scat Sat Flor (5% of Tray) FOS (Brach, Coral) Sh Char-Gry-Grn Fissil FSG & FSO
 30" CFS @ 3220' Ls Wht-Crm-Tan Fxln Poor-Fair OOM Por (w/ OOL in pl) Poor-Fair Vug Leaching Poor-Fair Dissolu Sh Char Gry Grn-Blk Carb Fissil AA Pyr Mass Faint Odor Fair ? (Lt Grn) Sat Flor NS
HUSHPUCKNEY 3209' (- 1448)
 60" CFS @ 3220' Ls Wht-Crm-Tan Fxln Poor-Fair OOM Por (w/ OOL in pl) Poor- Fair Vug Leaching Poor-Fair Dissolu Sh Char Gry Grn-Blk Carb Fissil AA Pyr Mass Faint Odor Fair ? (Lt Grn) Sat Flor NS
 Ls Wht-Crm-Tan Fxln Poor-Fair OOM Por (w/ OOL in pl) Poor Leaching Poor Dissolu Grad Micritic Sh Char Gry Grn-Blk Carb Fissil No Odor ? Sat Min Flor NS
BASE KANSAS CITY 3230' (- 1469)
 Sh Char-Gry-Blk Carb-Grn-Red Abd Fissil Ls Fxln Dns Micrite Tr/OOM Por AA Dec (? Sluff) Pyr Mass ? Faint Odor ? Min Flor (Few Pcs) No Vis Stn NS
 Ls Wht-Crm Fxln Dns Micrite Poor Ixln Por Grad No Vis Por Sh Char -Gry - Grn Fissil No Odor No Stn No Flor NS
 Ls Wht-Crm Fxln Dns Micrite Poor Ixln Por Grad No Vis Por Sh Char - Gry - Grn Fissil No Odor No Stn No Flor NS
 Sh Varicolored Red-Gry-Grn Fissil Ls AA Dns Micrite No Vis Por Cht-Red-Wht-Yell (w/OOL in pl) No Dissolu Op Shp Vit No Odor No Stn No Flor NS
ARBUCKLE 3272' (-1511)
 30" CFS @ 3288' Dolo Tan-Crm MicroIxln Poor Ixln Pin-Pt Por (w/SG & SO) ? "Tite" Good Flor (Lt Grn & Both Gas & Oil Do Flor) Med Odor Inc Cht Wht-Tan Op Shp Vit Grad Fair-Med Ixln Por FSG-FSO Inc.
 60" CFS @ 3288' 3288' Dolo Tan-Crm Fxln Med Ixln Pin-Pt Grad M-Lg Rhombic Ixln Por Med Vug Ixln Por Fair-Med Leaching Por (w/MSG & MSFO in Wtr Under Heat) Good Flor AA Good Odor Cht Wht-Tan Op No Dissolu Shp Vit GSG-GSO
 60" CFS @ 3295' Dolo Tan-Crm Fxln Med Ixln Pin-Pt Grad Sucrosic w/Tr Med Vug Ixln Por Fair Leaching Por (w/SG & SO) Good Flor AA Good Odor Cht Wht-Tan Op (w/Small OOid Includ) No Dissolu Shp Vit MSG-MSO
 60" CFS @ 3310' Dolo Tan-Crm Fxln Micrite Grad Fine-Med Pin-Pt Ixln Sucrosic Por Grad Tr OOM Por (w/V Lg InterOOM Vug Por (2 Pcs) & Good Leaching Por Good Flor Fair Odor Cht Wht-Tan Translu-Op Vit Pyr Mass M-GSG & M-GSO
 60" CFS @ 3330' Dolo Wht-Tan-Crm Fxln Fair-Med Ixln Pin-Pt Por Grad Med Rhombic Ixln Por Fair Leaching Por (w/SG & SO in Wtr Under Heat) Grad Micritic Good Flor AA No Odor Cht Wht Translu-Op Shp Vit SSG & SSO
 Dolo Wht-Tan-Crm Fxln Fair-Med Ixln Pin-Pt Por Grad Med Rhombic Ixln Por Fair Leaching Por (w/SG & SO in Wtr Under Heat) Grad Micritic Good Flor AA No Odor Cht Wht Translu-Op Shp Vit SSG & SSO
 Dolo Wht-Tan-Crm Fxln Fair-Med Ixln Pin-Pt Por Grad Med Rhombic Ixln (w/Small OOids in pl) Por Fair Leaching Por (w/SG & SO in Wtr Under Heat) Grad Micritic Good Flor AA No Odor Cht Wht Op Shp Vit SSG & SSO
 Dolo Wht-Tan Fxln Med Ixln Pin-Pt Por Grad Small Rhombic Ixln Por Fair Leaching Por Grad Micritic Good Flor Cht Wht Op Shp Vit No Stn No Odor NS
 30" CFS @ 3380' Dolo Wht-Tan Fxln Med Ixln Pin-Pt Por Grad Small Rhombic Ixln Por Fair Leaching Por Grad Micritic Good Flor Cht Wht Op Shp Vit No Stn No Odor NS
 75" CFS @ 3380' Dolo Wht-Tan Fxln Med Ixln Pin-Pt Por Grad Small Rhombic Ixln Por Fair Leaching Por Grad Micritic Good Flor Cht Wht Op Shp Vit No Stn No Odor NS
 Electric Logs Run: By Tucker Wireline Logging: Dual Induction; Compensated Density-Neutron & Microresistivity Logs.

WL = 7.6;
 Cake = 1;
 Chl=7300;
 Cal= 20;
 Sol=5.3%.
 LCM= 0 #;
 DMC=
 \$550.30
 CMC=
 \$7,010.00
~ DST # 2 ~
 3258'-3295'.
 Times:
 30"-30"-30"-30";
 Blow: IF =
 Strong/BOB/3".
 ISIP No Blow
 Back.
 FF= Strong/
 BOB/ 2.5". FSIP=
 No Blow Back.
 Recovery:
 1827' TF: 120'
 GIP; 1575' Oil
 (100% O) & 252'
 GOCM (25% Gas;
 10% Oil; 65%
 Mud).
 API Grv. = 38.7
 degrees.
 Pressures:
 IH = 1657#;
 FH = 1667#;
 IF = 55-402#; FF
 = 407-642#; ISIP
 = 1078#; FSIP=
 1032#;
 Temp. = 118
 degrees. F.
 Mudco Ck
 @ 3380' @
 7:40 AM
 10/22/13
 Vis = 65;
 WT = 9.2;
 PV = 17;
 YP = 21;
 WL = 8.0;
 Cake = 1;
 Chl = 9500;
 Cal = 20;
 Sol = 5.9%.
 LCM = 1#;
 DMC =
 \$ < 75.95 >
 CMC =
 \$6,934.05
 Geologist left Location at 5:15 P.M. 10/22/2013



DRILL STEM TEST REPORT

Prepared For: **DS Langston**

310 W Central Ste 202
Wichita, KS 67202

ATTN: Dave Williams

Reif #31-2

31-18s-10w Rice,KS

Start Date: 2013.10.20 @ 20:43:00

End Date: 2013.10.21 @ 03:14:30

Job Ticket #: 55761 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.10.24 @ 13:45:39

DS Langston
31-18s-10w Rice,KS
Reif #31-2
DST # 1
KC "I-L"
2013.10.20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

DS Langston
 310 W Central Ste 202
 Wichita, KS 67202
 ATTN: Dave Williams

31-18s-10w Rice, KS
Reif #31-2
 Job Ticket: 55761 **DST#: 1**
 Test Start: 2013.10.20 @ 20:43:00

GENERAL INFORMATION:

Formation: **KC "I-L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:36:00
 Time Test Ended: 03:14:30
 Interval: **3124.00 ft (KB) To 3220.00 ft (KB) (TVD)**
 Total Depth: 3220.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brannan L
 Unit No: 67
 Reference Elevations: 1761.00 ft (KB)
 1751.00 ft (CF)
 KB to GR/CF: 10.00 ft

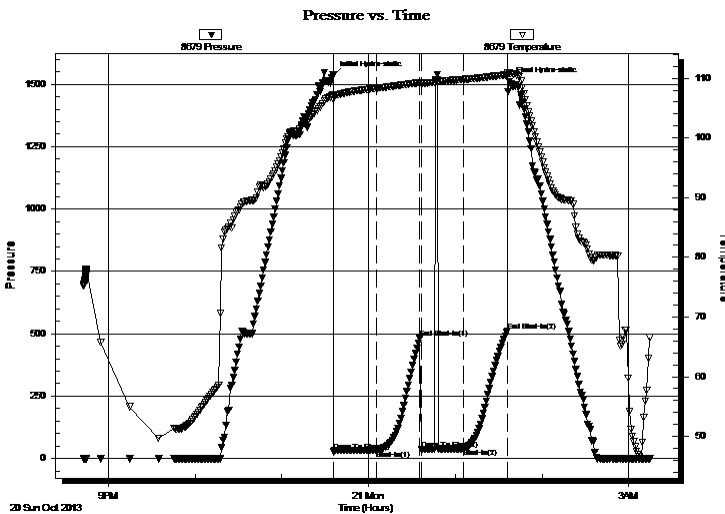
Serial #: 8679

Inside

Press @ RunDepth: 39.20 psig @ 3216.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.20 End Date: 2013.10.21 Last Calib.: 2013.10.21
 Start Time: 20:43:01 End Time: 03:14:30 Time On Btm: 2013.10.20 @ 23:35:30
 Time Off Btm: 2013.10.21 @ 01:37:30

TEST COMMENT: 30- IF- Surface blow died in 2 mins
 30- IS- No blow
 30- FF- No blow Flushed tool No blow
 30- FSI- No blow

PRESSURE SUMMARY



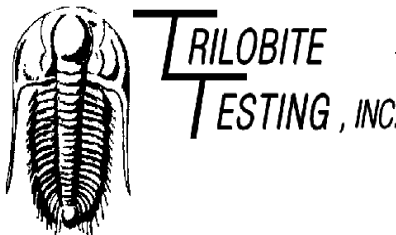
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1536.63	107.31	Initial Hydro-static
1	28.90	106.39	Open To Flow (1)
30	33.95	108.31	Shut-In(1)
60	483.51	109.26	End Shut-In(1)
61	35.39	109.11	Open To Flow (2)
90	39.20	109.80	Shut-In(2)
121	511.70	110.54	End Shut-In(2)
122	1511.01	110.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mw / oil spots, 100%M	0.27

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



DRILL STEM TEST REPORT

DS Langston
 310 W Central Ste 202
 Wichita, KS 67202
 ATTN: Dave Williams

31-18s-10w Rice, KS
Reif #31-2
 Job Ticket: 55761 **DST#: 1**
 Test Start: 2013.10.20 @ 20:43:00

GENERAL INFORMATION:

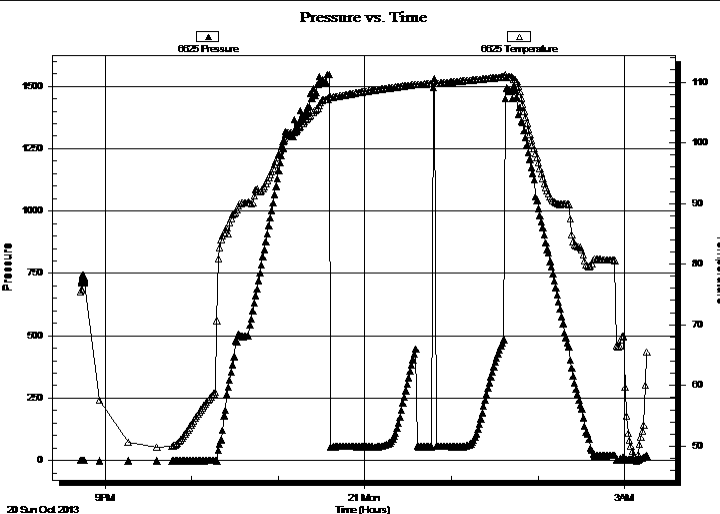
Formation: **KC "I-L"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 23:36:00
 Tester: Brannan L
 Time Test Ended: 03:14:30
 Unit No: 67
Interval: 3124.00 ft (KB) To 3220.00 ft (KB) (TVD)
 Reference Elevations: 1761.00 ft (KB)
 Total Depth: 3220.00 ft (KB) (TVD)
 1751.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 10.00 ft

Serial #: 6625

Outside

Press @RunDepth: psig @ 3216.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.20 End Date: 2013.10.21 Last Calib.: 2013.10.21
 Start Time: 20:43:01 End Time: 03:15:22 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30- IF- Surface blow died in 2 mins
 30- IS- No blow
 30- FF- No blow Flushed tool No blow
 30- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	M w / oil spots, 100%M	0.27

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DS Langston
310 W Central Ste 202
Wichita, KS 67202
ATTN: Dave Williams

31-18s-10w Rice,KS
Reif #31-2
Job Ticket: 55761 **DST#: 1**
Test Start: 2013.10.20 @ 20:43:00

Tool Information

Drill Pipe:	Length: 3106.00 ft	Diameter: 3.75 inches	Volume: 42.43 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	46000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	45000.00 lb
Drill Pipe Above KB:	9.00 ft			Final	45000.00 lb
Depth to Top Packer:	3124.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	96.00 ft				
Tool Length:	123.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3098.00	
Shut In Tool	5.00			3103.00	
Hydraulic tool	5.00			3108.00	
Jars	5.00			3113.00	
Safety Joint	2.00			3115.00	
Packer	5.00			3120.00	27.00 Bottom Of Top Packer
Packer	4.00			3124.00	
Stubb	1.00			3125.00	
Perforations	26.00			3151.00	
Change Over Sub	1.00			3152.00	
Drill Pipe	63.00			3215.00	
Change Over Sub	1.00			3216.00	
Recorder	0.00	6625	Outside	3216.00	
Recorder	0.00	8679	Inside	3216.00	
Bullnose	4.00			3220.00	96.00 Bottom Packers & Anchor

Total Tool Length: 123.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DS Langston
310 W Central Ste 202
Wichita, KS 67202
ATTN: Dave Williams

31-18s-10w Rice,KS
Reif #31-2
Job Ticket: 55761 **DST#: 1**
Test Start: 2013.10.20 @ 20:43:00

Mud and Cushion Information

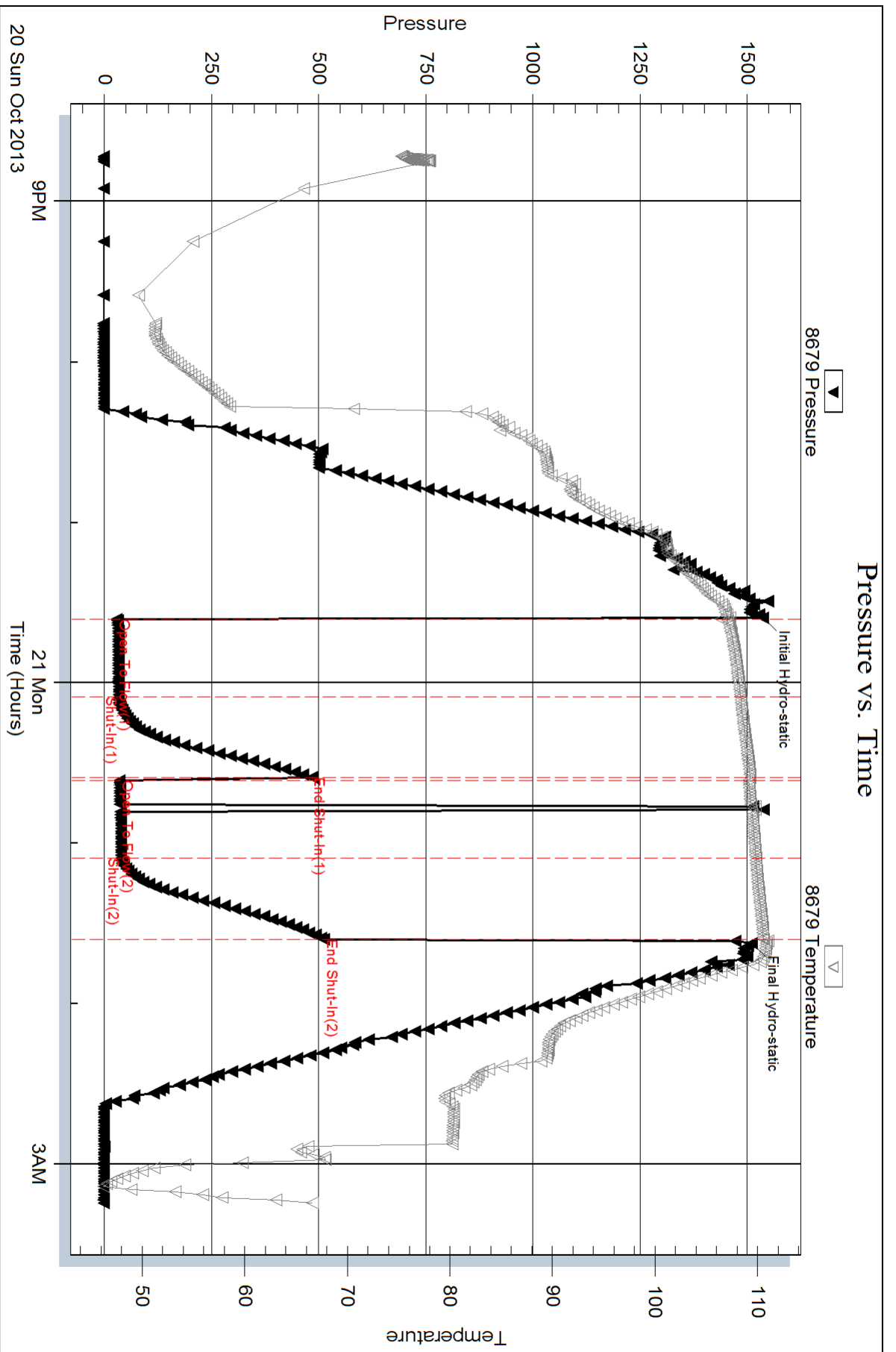
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 9200.00 ppm			
Filter Cake: inches			

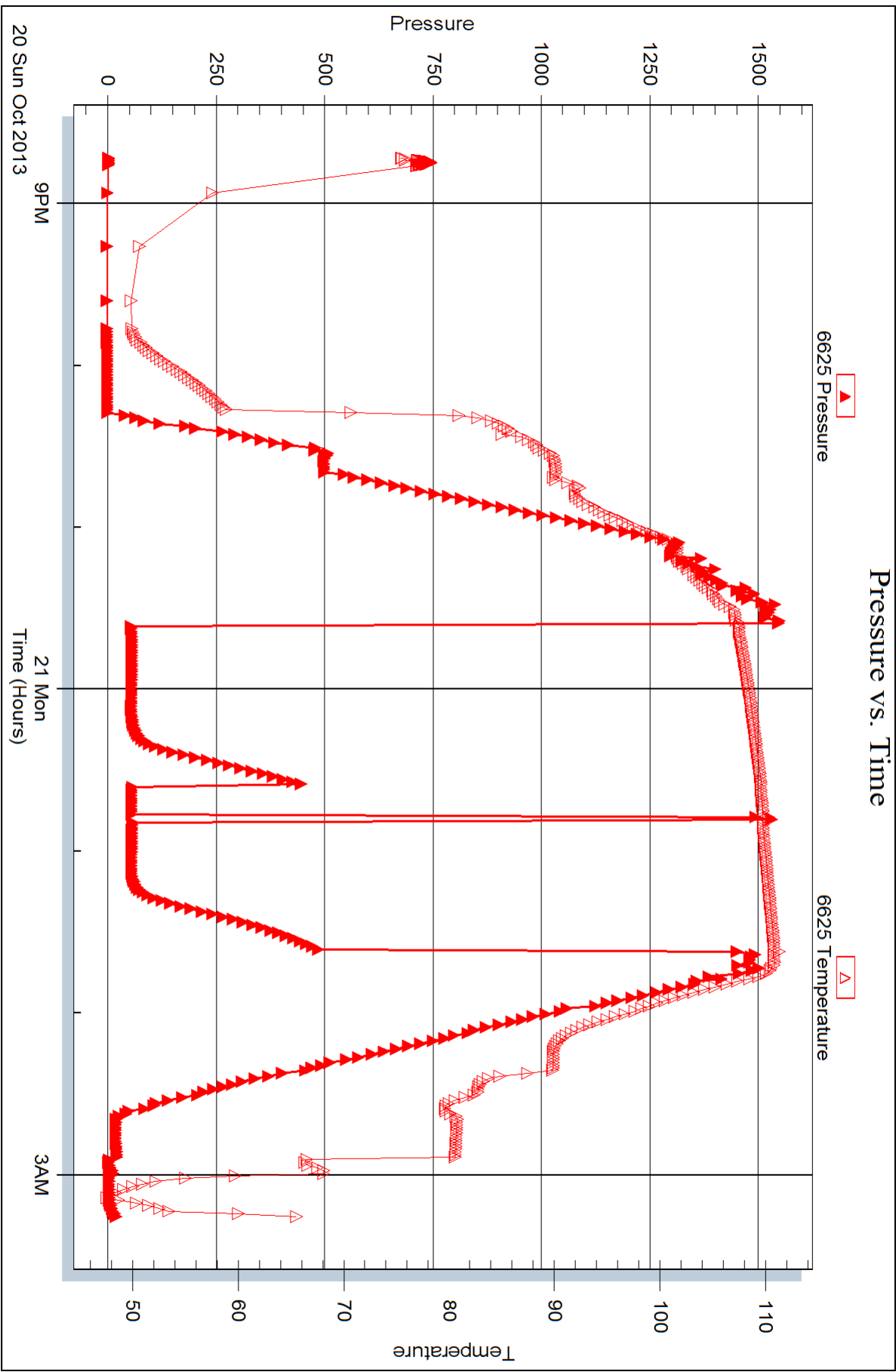
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mw / oil spots, 100%M	0.273

Total Length: 20.00 ft Total Volume: 0.273 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **DS Langston**

310 W Central Ste 202
Wichita, KS 67202

ATTN: Dave Williams

Reif #31-2

31-18s-10w Rice,KS

Start Date: 2013.10.21 @ 13:58:47

End Date: 2013.10.21 @ 20:42:02

Job Ticket #: 52513 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.10.24 @ 13:43:55

DS Langston
31-18s-10w Rice,KS
Reif #31-2
DST # 2
Arbuckle
2013.10.21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DS Langston
310 W Central Ste 202
Wichita, KS 67202
ATTN: Dave Williams

31-18s-10w Rice,KS
Reif #31-2
Job Ticket: 52513 **DST#: 2**
Test Start: 2013.10.21 @ 13:58:47

Tool Information

Drill Pipe:	Length: 3262.00 ft	Diameter: 3.80 inches	Volume: 45.76 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 45.76 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3258.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3237.00	
Hydraulic tool	5.00			3242.00	
Jars	5.00			3247.00	
Safety Joint	2.00			3249.00	
Packer	5.00			3254.00	26.00 Bottom Of Top Packer
Packer	4.00			3258.00	
Stubb	1.00			3259.00	
Recorder	0.00	6798	Inside	3259.00	
Recorder	0.00	8367	Outside	3259.00	
Perforations	33.00			3292.00	
Bullnose	3.00			3295.00	37.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DS Langston
310 W Central Ste 202
Wichita, KS 67202
ATTN: Dave Williams

31-18s-10w Rice,KS
Reif #31-2
Job Ticket: 52513 **DST#: 2**
Test Start: 2013.10.21 @ 13:58:47

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 37.8 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.58 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 9200.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

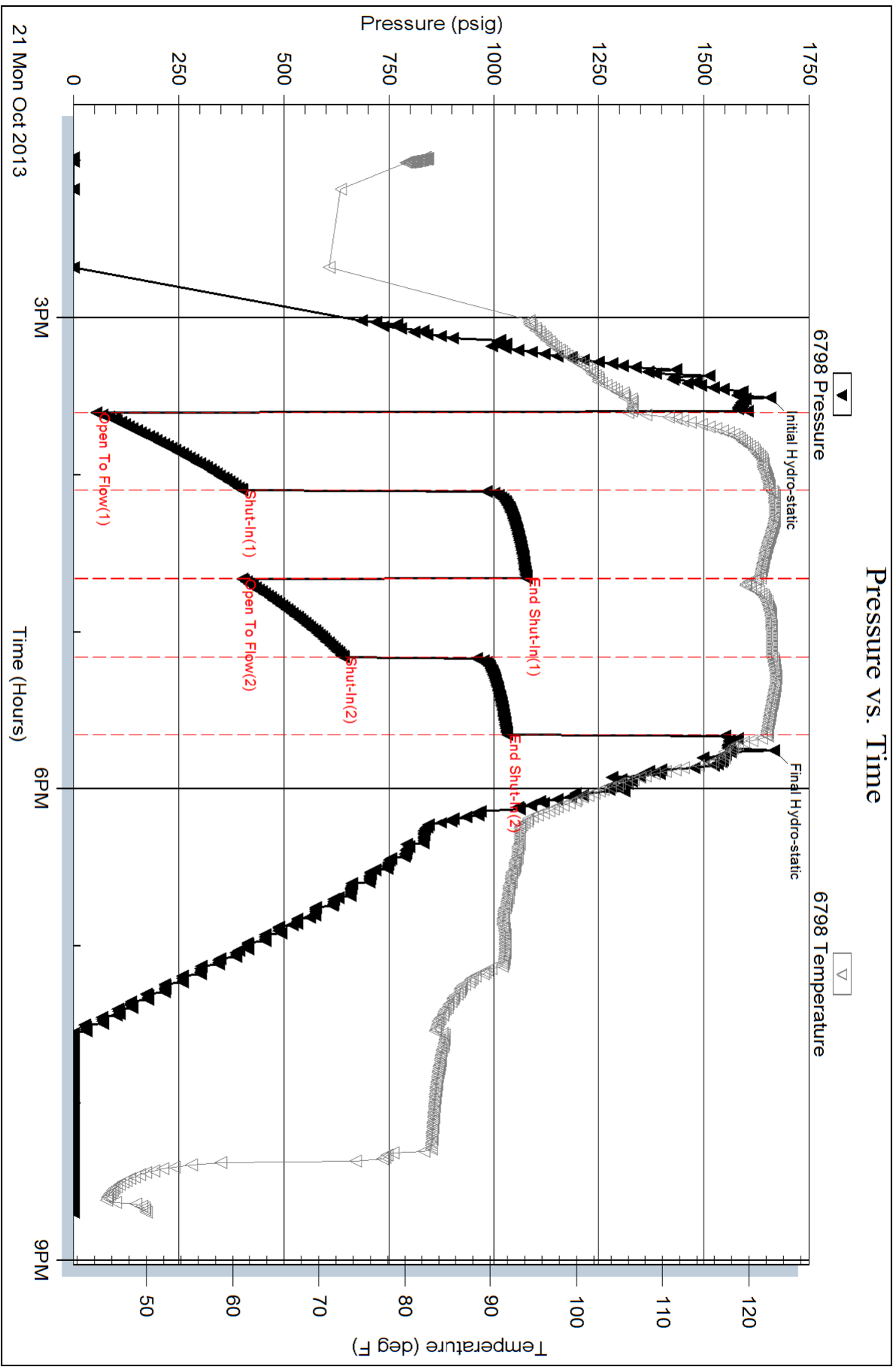
Length ft	Description	Volume bbl
0.00	120 GIP	0.000
252.00	OGCM 10%O 25%G 65%M	3.535
1575.00	Oil	22.093

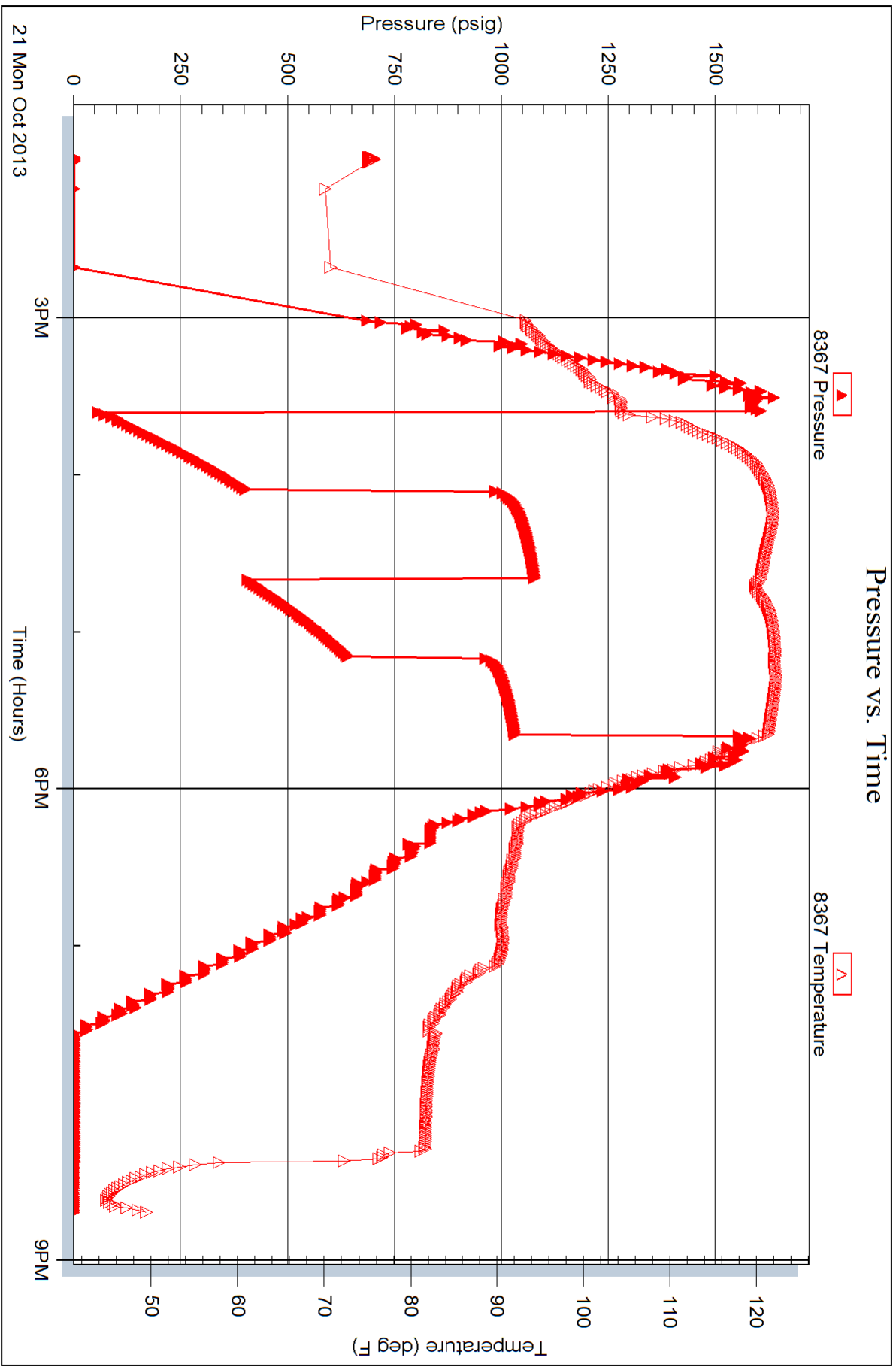
Total Length: 1827.00 ft Total Volume: 25.628 bbl

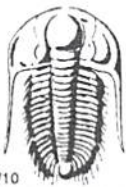
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity Was 36.8 @ 50 degrees







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55761

4/10

Well Name & No. Ref #31-2 Test No. 1 Date 10/20/13
 Company DS Langston Elevation 1761 KB 1757 GL
 Address 310 W. Central Ave 202 Wichita, KS 67202
 Co. Rep / Geo. Dave Williams Rig Southwind #6
 Location: Sec. 31 Twp. 18s Rge. 10w Co. Rice State KS

Interval Tested 3124-3220 Zone Tested KC "I-L"
 Anchor Length 96 Drill Pipe Run 3106 Mud Wt. 9.1
 Top Packer Depth 3119 Drill Collars Run ———— Vis 45
 Bottom Packer Depth 3124 Wt. Pipe Run ———— WL 2.6
 Total Depth 3220 Chlorides 9200 ppm System LCM ————

Blow Description IF - Surface blow died in 2 mins
ISI - No blow
FF - No blow Flushed tool after 10 mins No blow
FSI - No blow

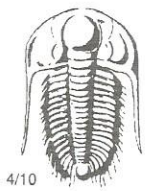
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>M w/ oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 111° Gravity ———— API RW ———— @ ———— °F Chlorides ———— ppm

(A) Initial Hydrostatic <u>1537</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2015</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2043</u>
(C) First Final Flow <u>34</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2336</u>
(D) Initial Shut-In <u>484</u>	<input type="checkbox"/> Circ Sub <u>————</u>	T-Pulled <u>0136</u>
(E) Second Initial Flow <u>35</u>	<input type="checkbox"/> Hourly Standby <u>————</u>	T-Out <u>0315</u>
(F) Second Final Flow <u>39</u>	<input checked="" type="checkbox"/> Mileage <u>162 RT</u> 217	Comments <u>————</u>
(G) Final Shut-In <u>512</u>	<input type="checkbox"/> Sampler <u>————</u>	<input type="checkbox"/> Ruined Shale Packer <u>————</u>
(H) Final Hydrostatic <u>1511</u>	<input type="checkbox"/> Straddle <u>————</u>	<input type="checkbox"/> Ruined Packer <u>————</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>————</u>	<input type="checkbox"/> Extra Copies <u>————</u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer <u>————</u>	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u>————</u>	Total <u>1692</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>————</u>	MP/DST Disc't <u>————</u>
	<input type="checkbox"/> Accessibility <u>————</u>	
	Sub Total <u>1692</u>	

Approved By _____ Our Representative Brannon L

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52513

Well Name & No. REIF 31-2 Test No. 2 Date 10/21/13
 Company DS Langston Elevation 1761 KB 1751 GL
 Address 310 W. Central St 202 Wichita, KS 67202
 Co. Rep / Geo. Dave Williams Rig Southwind 6
 Location: Sec. 31 Twp. 18S Rge. 10W Co. Rice State KS

Interval Tested 3258 - 3295 Zone Tested Arbuckle
 Anchor Length 37 Drill Pipe Run 3262 Mud Wt. 9.1
 Top Packer Depth 3253 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 3258 Wt. Pipe Run 0 WL 7.6
 Total Depth 3295 Chlorides 7300 ppm System LCM

Blow Description IF: Strong Blow, BOB in 3 minutes
ISI: NO Blow Back
FF: Strong Blow, BOB in 2 1/2 minutes
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>GI P</u>				
<u>1575</u>	<u>Oil</u>				
<u>252</u>	<u>GOCM</u>	<u>25</u>	<u>10</u>		<u>65</u>

Rec Total 1827 BHT 118 Gravity 37.8 API RW NIC @ NIC ° F Chlorides NIC ppm

(A) Initial Hydrostatic <u>1657</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>13:30</u>
(B) First Initial Flow <u>55</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:58</u>
(C) First Final Flow <u>402</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:36</u>
(D) Initial Shut-In <u>1078</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>17:39</u>
(E) Second Initial Flow <u>402</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>20:42</u>
(F) Second Final Flow <u>642</u>	<input checked="" type="checkbox"/> Mileage <u>140</u> 217	Comments
(G) Final Shut-In <u>1032</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1667</u>	<input type="checkbox"/> Straddle	

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1692
 MP/DST Disc't

Sub Total 1692

Approved By [Signature] Our Representative [Signature]

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